

IN THE CLAIMS

1-21 (Canceled)

22. (Currently amended) A coating composition resistant to resist water vapor moisture penetration into a substrate susceptible to water vapor incursion coated with the coating, the composition prepared by a process comprising:

heating and blending together a mixture comprising waxes and paraffins and dispersing powdered metal, metal oxide, or metal carbide throughout the mixture; and  
cooling the mixture to form a waxy solid substantially free of entrained gasses, the waxy solid having powdered metal, metal oxide or metal carbide dispersed therein;  
wherein the composition forms a homogeneous coating on a substrate surface, without need to apply heat to the composition or substrate, so that moisture water vapor incursion into the coated substrate is reduced by at least about 50% as compared to an uncoated substrate maintained under the same temperature and moisture humidity conditions.

23. (Previously presented) The coating composition of claim 22, wherein the mixture comprises a mixture of beeswax and paraffins.

24. (Previously presented) The coating composition of claim 23, wherein the paraffins comprise primarily aliphatic hydrocarbons having chain lengths in the range from about 18 to about 36 carbon atoms.

25. (Previously presented) The coating composition of claim 22, wherein the metal comprises aluminum.

26. (Previously presented) The coating composition of claim 22, wherein the metal oxide comprises titanium oxide or aluminum oxide.

27. (Previously presented) The coating composition of claim 23, wherein the metal comprises aluminum.

28. (Previously presented) The coating composition of claim 23, wherein the metal oxide comprises titanium oxide or aluminum oxide.
29. (Previously presented) The coating composition of claim 22, wherein during the process of preparing the mixture, before adding powdered metal or metal oxide, the mixture has a melting point in the range of about 120 to 200°F.
30. (Previously presented) The coating composition of claim 22, wherein the composition is a solid at temperatures in the range below about 140°F, and liquefies upon heating to a temperature in the range from about 170 to about 190°F.
31. (Previously presented) The coating composition of claim 22, wherein the powdered metal or metal oxide or metal carbide comprises a sufficient amount to permit uniform heating of a mass of the composition, and to provide such internal compression of a mass of the composition upon cooling as to substantially exclude occluded gasses from a cooled mass.
32. (Previously presented) The coating composition of claim 22, wherein the amount of powdered metal or metal oxide in the mixture comprises from about 5 to about 15 wt. %, based on the weight of the mixture.
33. (Currently amended) The coating composition of claim 22, wherein when coated onto a composite substrate subject to moisture absorption under hot and wet humid ambient conditions, the coating composition reduces moisture water vapor absorption by from about 60 to about 100% as compared to an uncoated composite.
34. (Currently amended) A coating composition resistant to penetration by moisture water vapor, the composition substantially preventing water vapor moisture absorption into a composite otherwise subject to water vapor moisture absorption under hot and humid wet ambient conditions, the composition comprising:

a) a mixture of esters of fatty acids and aliphatic hydrocarbons having a melting point in the range from about 170 to about 190°F; and

b) a powdered additive comprising powdered aluminum, the powdered aluminum comprising particulates in the range from about 25 to about 60 microns and the powdered aluminum present in sufficient amount quantity to permit uniform heating of a mass of the composition and to provide compression of a mass of the composition upon cooling sufficient to substantially exclude occluded gasses from a cooled mass; wherein the composition forms a homogeneous coating on a substrate surface, without need to apply heat to the composition or substrate, so that water vapor moisture incursion into the coated substrate is reduced by at least about 50% as compared to an uncoated substrate under the same temperature and humidity moisture conditions

35. (Previously presented) The coating composition of claim 34, wherein the mixture comprises paraffins and waxes, the paraffins primarily having a chain length of from about 18 to about 36 carbon atoms.

36. (Cancelled) The coating composition of claim 34, wherein the powdered additive is selected from the group consisting of powdered metals, metal carbides and metal oxides.

37. (Cancelled) The coating composition of claim 35, wherein the powdered additive comprises powdered aluminum comprising particulates in the range from about 25 to about 60 microns.

38. (Cancelled) The coating composition of claim 36, wherein the powdered additive is selected from aluminum and titanium oxide.

39. (Previously presented) The coating composition of claim 34, wherein the composition comprises a solid at ambient temperatures in the range below about 140°F.

40. (Currently amended) The coating composition of claim 34, wherein when coated onto a composite substrate, the coating composition forms a coating that reduces ~~moisture~~ water vapor absorption by from about 60 to about 100%.